

International Conference
on Indoor Air Quality

Tokyo, 1987

PROGRAM

November 4-6, 1987
New Otani

Ministry of Environment and Health

2026210821

ORGANIZING COMMITTEE MEMBERS

- Chairman** Hitoshi Kasuga, M.D., Ph.D.
Professor, School of Medicine, Tokai University
- Vice-Chairman** Kazuho Maeda, M.D., Ph.D.
Professor, School of Health Sciences, University of Tokyo
Seigo Fukuma, M.D., Ph.D.
Emeritus President, Chiba Cancer Center
Gerhard Lehnert, M.D., Ph.D.
Professor, University of Hamburg
- Members** Chikio Hayashi, Ph.D.
Professor, The University of the Air
Yoshizo Tsunetoshi, M.D., Ph.D.
Professor, Miyazaki Medical College
Kazuo Takemoto, M.D., Ph.D.
Professor, Saitama Medical School
Masaaki Fukushima, M.D., Ph.D.
Professor, Fukushima Medical College
- Auditors** Tatsuya Ishiguro, M.D., Ph.D.
Assistant Professor, Shiga University of Medical Science
Yoshiharu Shimizu, Ph.D.
Saitama Medical School
- Advisors** Kunio Ohta, M.D., Ph.D.
President, Japanese Association of Medical Sciences
Hideo Katsuki, M.D., Ph.D.
President, The University of the Air
Yuichiro Goto, M.D., Ph.D.
Director, The Tokai University Hospital
- Secretary General** Hideaki Matsuki, Ph.D.
Assistant Professor, School of Medicine, Tokai University

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WELCOME TO TOKYO

Welcome to the International Conference on Indoor Air Quality, and welcome to Tokyo.

Among the numerous environmental problems facing modern man today, indoor air quality has become a serious social issue of vital concern.

This Conference has been organized in recognition of the need to address this issue from an international perspective, by assembling researchers renowned worldwide in the relevant fields as well as younger members of the scientific community engaged in promising new research endeavors. It is hoped that the participants will engage in truly fruitful academic interchange that offers a comprehensive presentation of both the present and future of research on indoor air quality.

As a member of the Organizing Committee, it also gives me great pleasure to inform you that, aside from two or three who could not attend due to illness, virtually all of those invited to this Conference are here today—a remarkable feat in itself. My colleagues and I hope that all of you will gain new insights through this Conference, and meet old friends as you make new ones.



Hitoshi Kasuga

Chairman

*Organizing Committee of International
Conference on Indoor Air Quality*

President

The Council for Environment and Health

2026210823

GENERAL INFORMATION

- Date** Wednesday, November 4 - Friday, November 6, 1987
- Venue** The New Otani
(Kaede Room, Main Bldg., Banquet Floor)
4-1 Kioicho, Chiyoda-ku, Tokyo 102
Phone: (03) 265-1111 Tx 24719
- Registration** The Registration desk will be open on the Banquet Floor, Main Building, The New Otani, outside the Kaede Room (the conference room) during the following hours:
—November 4 (WED) 8:30-17:00
—November 5 (THU) 8:00-13:00
- Conference Language**
The official languages of the Conference are English and Japanese. Simultaneous interpretation will be provided between these languages.
- Proceedings** The Proceedings of the conference will be published by the International Archives of Occupational & Environmental Health.
- Hotel Accommodations**
Please check-in at the front desk of the New Otani (Lobby Floor, Main Building) on your arrival.
We have reserved rooms for participants as follows:
Check-in date: November 3 (TUE)
Check-out date: November 7 (SAT)
- Climate** The climate in Tokyo in early November is very pleasant with an average temperature of 15°C and humidity of 70 percent. Participants should bring a light coat for going out in the morning or at night. No formal wear is required throughout the conference.

Bank and Post

The front desk of the New Otani can help you with these services.

Access to downtown Tokyo from the New Tokyo International Airport (Narita)

From the New Tokyo International Airport (Narita), limousine bus service running directly to the New Otani is available at 14:45, 15:45, 16:15, 16:45, 17:15, 17:45, 18:45, 19:45, 20:45 and 21:45.

Participants arriving at Narita at other times may take a limousine bus departing from Narita every 10 minutes for the Tokyo City Air Terminal (Hakozaki) in downtown Tokyo. The New Otani can be conveniently reached by taxi from the Tokyo City Air Terminal.

Fares as of September 20 are:

Narita Airport-The New Otani

by limousine bus ¥2,700

Narita Airport-Tokyo City Air Terminal

by limousine bus ¥2,500

Tokyo City Air Terminal-The New Otani

by taxi approx. ¥2,500

INSTRUCTIONS FOR SPEAKERS AND PANELISTS

All speakers and panelists are requested to report to the "Program Personnel Desk" in the registration area. Since the presentation schedule is subject to change, it is very important to reconfirm the presentation time at the desk.

Speakers

- (1) If you plan to use slides, please come to the reception desk in front of the conference room at least one hour before the session starts to preview and preload slides.
- (2) Speaking time is limited to 10 minutes (including slides and OHP) for each presentation. Five minutes of discussion will follow each presentation.
- (3) The following equipment will be provided:
 - One 35 mm slide projector
(for mounted slides measuring 5 by 5 cm)
 - One overhead projectorThe number of slides and overhead projector transparencies combined should not exceed 7.
- (4) In order to ensure smooth simultaneous interpretation, it is essential that the manuscript of your oral presentation be received in advance so that the interpreters will have enough time to study the technical terms and their contexts.

We request that you prepare your oral text according to the following format and send it to the Secretariat.

Copies: 3 identical copies

Length: Approximately 10 lines of typescript per minute of speaking time.
Adequate time should be allowed for slides.

Language: In your presentation language.

Deadline: October 20, 1987

Send to: The Secretariat
c/o Simul International, Inc.
Kowa Bldg. No.9
1-8-10, Akasaka, Minato-ku, Tokyo 107,
Japan

- (5) Proceedings The proceedings of the Conference will be published after the Conference. Speakers are requested either to deliver manuscripts of their presentations (limited to 20, A4-size paper including charts and tables) to the Program Personnel Desk during the Conference itself, or to mail them to the Secretariat by December 25, 1987.

CONFERENCE SCHEDULE

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
November 4 (Wednesday)	Registration												Welcome Party	
	Opening Address Keynote Lectures				Presentations <II> Session 1-2			Presentations <II> + <III> Session 3-5						
November 5 (Thursday)	Registration												Evening Session Session 13	
	Presentation <III> Session 6-7		Presentations <III> + <IV> Session 8-9			Presentations <IV> Session 10-11			Panel Discussion <IV> Session 12					
November 6 (Friday)	Presentations <I> Session 14-15		Presentations <I> Session 16-17			Panel Discussion <I> + <II> + <III> Session 18 Closing Remarks								

N.B.:

- I. Indoor Air Pollution
- II. Measurement of Environment Tobacco Smoke (ETS)
- III. Biological Effects of Environmental Tobacco Smoke
- IV. Epidemiology of Passive Smoking

PROGRAM

November 4 (Wednesday)

OPENING ADDRESS

10:00-10:10 Hitoshi Kasuga
Chairman of Organizing Committee
President of The Council for Environment and Health

KEYNOTE LECTURES

10:10-12:10

- 10:10 Progress and Outlook of Research on Passive Smoking:
Biological Effects of Environmental Tobacco Smoke
Ernst L. Wynder
American Health Foundation, U.S.A.
- 10:40 Environmental Tobacco Smoke: Measuring Exposure and Assessing
Health Effects.
Barbara S. Hulka
School of Public Health, University of North Carolina, U.S.A.
- 11:10 Increased Risk of Lung Cancer in Non-smokers Married to Smokers:
A Result of ETS Exposure or of Bias?
Peter N. Lee
P.N. Lee Statistics and Computing Ltd, U.K.
- 11:40 Recent Studies on Urinary Hydroxyproline and Its Relationship with
Smoking and Involuntary Smoking
Hitoshi Kasuga
School of Medicine, Tokai University

Session 1

ETS Measurement (1)

13:00-14:00

Chairpersons: K. Takemoto
Saitama Medical School, Japan
S.R. DiNardi
*School of Health Sciences, University of
Massachusetts, U.S.A.*

- 13:00 1 The Aging of Sidestream Tobacco Smoke Components in Ambient Environments
R. G. Rawbone, W. Burns, G. Haslett
Gallagher Ltd, Northern Ireland
- 13:15 2 Indoor Air Quality: The Contribution of Environmental Tobacco Smoke
R. Perry, J. N. Lester, M. Hunter, P. W. W. Kirk
Imperial College, University of London, U.K.
- 13:30 3 Measurements of ETS-Components in Indoor Air under Real-Life Conditions
M. Ball, M. Intorp, B. Schilling
H.F. & Ph. F. Reemtsma R&D, F.R.G.
- 13:45 4 Personal Exposure to Ambient Nicotine in Different Seasons
S. Umemura, M. Muramatsu, Y. Ishizu
Japan Tobacco Inc., Japan

Session 2

ETS Measurement (2)

14:00-15:15

Chairpersons: F. Adlkofer
*Forschungsgesellschaft Rauchen und Gesundheit
mbH, F.R.G.*
H. Matsushita
The Institute of Public Health, Japan

- 14:00 5 The Measurement of ETS through Adsorption/Desorption Procedures
C. J. Proctor, H. Dymond
BAT(UK&E) R&D Centre, U.K.
- 14:15 6 Measurement of Environmental Tobacco Smoke
S. R. DiNardi, J. F. Ludwig, S. E. Froehlich
School of Health Sciences, University of Massachusetts, U.S.A.
- 14:30 7 Removal of Cigarette Smoke Particulates from Room Environment
H. Emi, C. Kanaoka, Y. Otani
Kanazawa University, Japan
- 14:45 8 Results from Surveys of Environmental Tobacco Smoke (ETS) in Offices and Restaurants
G. B. Oldaker III, P. F. Perfetti, F. C. Conrad, Jr.,
J. M. Conner, R. L. McBride
R. J. Reynolds Tobacco Company, U.S.A.
- 15:00 9 Strategy for Future ETS Exposure Measurements Relative to Its Transient Nature
H. K. O'Neill
International Agency for Research on Cancer, France

Session 3 **ETS Measurement (3)**

- 15:30-16:30 Chairpersons: R. Rylander
University of Gothenburg, Sweden
Y. Shimizu
Saitama Medical School, Japan
- 15:30 10 Assessment of ETS Impact to Office Air Quality
J. J. Piade, W. Fink
Philip Morris Europe, Switzerland

- 15:45 11 Measurements of ETS-Components in Indoor Air under Controlled Conditions

H. Klus, H. Begutter, A. Nowak, N. Seiz, I. Ultsch
Austria Tabakwerke AG, Austria

- 16:00 12 ETS Levels in Nonsmoking Workplaces when Smoking is Restricted to Designated but not Separately Ventilated Areas

T. D. Sterling, C. Collett, B. Mueller
School of Computing Science, Simon Fraser University, Canada

- 16:15 13 Monitoring absorption of ETS nicotine by measuring cotinine in body fluids of nonsmokers

M. Curvall, E. Kazemi-Vala, C. R. Enzell
Swedish Tobacco Co., Sweden

[Session 4] Biological Effects of ETS (1)

- 16:30-17:15 Chairpersons: K.H. Norpoth
Institute of Hygiene and Occupational Medicine, Essen University, F.R.G.

H. Matsuki
Tokai University, Japan

- 16:30 14 ETS and Lung Cancer—Recent Aspects on Confounders and Dose Levels

R. Rylander
University of Gothenburg, Sweden

- 16:45 15 Urinary Mutagenicity, Hydroxyphenanthrene and Thioether Excretion after ETS Exposure

G. Scherer, K. Westphal, F. Adlkofer
Forschungsgesellschaft Rauchen und Gesundheit mbH, F.R.G.

- 17:00 16 Pulmonary Deposition and Retention Modeling of Environmental Tobacco Smoke (ETS)

G. Oberdörster
University of Rochester, U.S.A.

Session 5

Biological Effects of ETS (2)

- 17:15-18:00 Chairpersons: M. Fukushima
Fukushima Medical College, Japan

H. P. Wiedemann
Cleveland Clinic Foundation, U.S.A.

- 17:15 17 The Effects of Environmental Tobacco Smoke on Pulmonary Function

M. D. Lebowitz, J. J. Quackenboss
University of Arizona Medical Center, U.S.A.

- 17:30 18 Are There Any Impairments of Maximal Expiratory Flow-Volume Curves by Passive Smoking?

M. Kentner, D. Weltle
Institute of Occupational and Social Medicine and Polyclinic of Occupational Diseases, The University of Erlangen-Nuremberg, F.R.G.

- 17:45 19 Smoking Effects on Biochemical Components in Fetal or Maternal Circulation

T. Ishiguro,* A. Takenaka**, Y. Shimizu**
**Shiga University of Medical Science, Japan*
***Saitama Medical School, Japan*

November 5 (Thursday)

Session 6

Biological Effects of ETS (3)

8:30-9:15

Chairpersons: M. D. Lebowitz
University of Arizona Medical Center, U.S.A.
S. Kira
School of Medicine, Juntendo University, Japan

8:30 20

Review of Experimental Studies of Human Respiratory Tract
Deposition of Sidestream Cigarette Smoke

F. C. Hiller
University of Arkansas for Medical Science, U.S.A.

8:45 21

Acute Effects of Passive Smoking on Lung Function and Airway
Reactivity in Asthmatic Subjects

H. P. Wiedemann, D. A. Mahler, J. Loke, J. A. Virgulto,
P. Snyder, R. A. Matthay
Cleveland Clinic Foundation, U.S.A.

9:00 22

Psychophysiological Response to Environmental Tobacco Smoke in
an Experimental Social Setting

G. Winneke, M. Neuf, A. Roscovanu, H. Schlipkoter
*Medizinisches Institut für Umwelthygiene an der Universität
Düsseldorf, Abt. für Psychophysiologie, F.R.G.*

Session 7

Biological Effects of ETS (4)

9:15-10:00

Chairpersons: J. Kagawa
Tokyo Women's Medical College, Japan
M. Kentner
*Institute of Occupational and Social Medicine
and Polyclinic of Occupational Diseases, The
University of Erlangen-Nuremberg, F.R.G.*

- 9:15 23 On Acute Cardiovascular Responses to Experimental Passive Smoking in Young Healthy Male Adults

M. Asano, C. Ohkubo, A. Sasaki
The Institute of Public Health, Japan

- 9:30 24 Involuntary Smoking and Urinary Cotinine

H. Matsuki*, H. Kasuga*, K. Misawa*, Y. Kawano**
*Tokai University, Japan
**Sogo Medical Laboratories, Japan

- 9:45 25 A Comparison of Various Tobacco Smoke Related Products in Non-Smokers with Those in Non-heavy Smokers

E. Higashi*, S. Itani*, S. Hashimoto*, Y. Shimizu**
*Kyoto Senbai Hospital, Japan
**Saitama Medical School, Japan

Session 8

Biological Effects of ETS (5)

10:15-11:15

Chairpersons: M. W. First
*School of Public Health, Harvard University,
U.S.A.*

M. Asano
The Institute of Public Health, Japan

- 10:15 26 The Significance of Urinary Hydroxyproline Excretion in Smokers and Passive Smokers

F. Adlkofer, G. Scherer, W. D. Heller, X. Sünkeler, T. Heintz
Forschungsgesellschaft Rauchen und Gesundheit mbH, F.R.G.

- 10:30 27 The Effect of Parental Smoking and Industrial Pollution on Birth Weight

P. T. Rantakallio, A. L. Hartikainensorri, P. Sipila, T. Leino
University of Oulu, Finland

- 10:45 28 Effect of Sidestream Smoke (Passive Smoke) on Cell Viability and Interferon Production

G. Sonnenfeld, D. M. Wilson
School of Medicine, University of Louisville, U.S.A.

- 11:00 29 Variation of Nicotine Concentration in Daily Environment

S. Kira*, T. Arai**, J. Fukui***, M. Aiba***, A. Iwase***,
Y. Doi***

**Juntendo University, School of Medicine, Japan*

***Kokusai Denshin Denwa Co., Ltd., Japan*

****Jichi Medical School, Japan*

Session 9 Epidemiology of Passive Smoking (1)

- 11:15-12:00 Chairpersons: J.W. Melia
*United Medical and Dental Schools of Guy's
and St. Thomas's Hospitals, U.K.*

S. Kikuchi
Nippon Medical School, Dai-ni Hospital, Japan

- 11:15 30 Harvard's Indoor Air Quality Respiratory Health Study

J. D. Spengler, D. W. Dockery, J. F. McCarthy, F. E. Speizer,
B. G. Ferris, J. H. Ware
School of Public Health, Harvard University, U.S.A.

- 11:30 31 Chest Diseases of Elderly Women due to Domestic Cooking and Passive Smoking. The Cracow Study

W. Jedrychowski, B. Tobiasz-Adamczyk, E. Mróz, J. Cecek
*Institute of Social Medicine, Medical School in Cracow,
Poland*

11:45 32 Model Specification Effects in ETS/Nutrition Epidemiology

S. J. Kilpatrick, Jr.
*Medical College of Virginia, Virginia Commonwealth University,
U.S.A.*

Session 10 Epidemiology of Passive Smoking (2)

13:00-14:15 Chairpersons: G. Lehnert
The University of Hamburg, F.R.G.
C. Hayashi
The University of the Air, Japan

13:00 33 Effect of Paternal Smoking on Fetuses

S. Kikuchi
Nippon Medical School, Dai-ni Hospital, Japan

13:15 34 Passive Smoking as a Low Level Carcinogen: Epidemiologic Risk Assessment

D. B. Trichopoulos
University of Athens Medical School, Greece

13:30 35 Health Risks of Passive Smoking: Lung Cancer

S. D. Stellman, L. Garfinkel
American Cancer Society, U.S.A.

13:45 36 "ETS: Lifetime Evaluations of Dose and Lung Cancer Risk among Never-Smoked Chinese Females in Hong Kong."

L. C. Koo, J. H-C. Ho
University of Hong Kong, Hong Kong

14:00 37 Passive Smoking and Lung Cancer
—A Review of Epidemiological Studies—

T. Hirayama
Institute of Preventive Oncology, Japan

Session 11

Epidemiology of Passive Smoking (3)

14:15-15:15 Chairpersons: T. Hirayama
Institute of Preventive Oncology, Japan
D. B. Trichopoulos
University of Athens Medical School, Greece

14:15 38 Air Pollution and Lung Cancer
G. X. Dong, W. Q. Yao, Z. Y. Xu
Liaoning Provincial Tumour Hospital & Institute, China

14:30 39 Meta-Analysis on Passive Smoking and Lung Cancer
H. Letzel, K. K. Überla
*Staticon Gesellschaft fuer medizinische Forschungsberatung
mbH, F.R.G.*

14:45 40 Epidemiological Issues on Involuntary Smoking and Lung Cancer,
and Suggestions for Future Studies
T. Namekata*, Y. Shimizu**
*Battelle Memorial Institute Human Affairs Research Centers,
U.S.A.
**Saitama Medical School, Japan

15:00 41 Passive Smoking and Lung Cancer: A Reanalysis of Hirayamas
Data.
K. K. Überla*, W. Ahlborn**
*Institut für Med. Informationsverarbeitung, Statistik und
Biometrie der Universität München, F.R.G.
**Institut für Statistik und Ökonometrie der Universität Göt-
tingen, F.R.G.

Session 12

Panel Discussion

Epidemiology of Passive Smoking

15:30-18:00

Chairpersons:

K. Maeda
*School of Health Sciences, University of
Tokyo, Japan*
T. Namekata
*Battelle Memorial Institute Human Affairs
Research Centers, U.S.A.*

Panelists:

S. Fukuma
Chiba Cancer Center, Japan
T. Hirayama
Institute of Preventive Oncology, Japan
B. S. Hulka
University of North Carolina, U.S.A.
H. Kasuga
Tokai University, Japan
P. N. Lee
*P. N. Lee Statistics and Computing Ltd.,
U.K.*
G. Lehnert
University of Hamburg, F.R.G.
N. Mantel
American University, U.S.A.
J. M. Stellman
*Columbia University School of Public
Health, U.S.A.*
T. D. Sterling
Simon Fraser University, Canada
K.K. Überla
University of Munich, F.R.G.
E.L. Wynder
American Health Foundation, U.S.A.